

# MYCOLOGICAL LITERATURE ON TEXAS FLESHY BASIDIOMYCOTA, TWO NEW COMBINATIONS, AND NEW FUNGAL RECORDS FOR TEXAS

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## ABSTRACT

An extensive literature search was made to determine all published articles and new species or infraspecific taxa of fleshy basidiomycetous fungi described from Texas. This search resulted in 202 articles on Texas fungi with 89 new taxa described from Texas. We also report on 52 new records of fleshy basidiomycetous fungi from Texas and propose two new combinations, **Hygrocybe chamaeleon** and **Hygrocybe mississippiensis**.

## RESUMEN

Se realizó una búsqueda extensa de todos los artículos publicados, de las especies nuevas, o taxa infraespecíficos de los hongos carnosos basidiomicetos descritos para Texas. Esta búsqueda dio como resultado 202 artículos relacionados con hongos en los que se describen 89 nuevos taxa para Texas por primera vez. También, reportamos aquí 52 nuevas especies de hongos carnosos basidiomicetos para Texas, y a la vez proponemos dos nuevas combinaciones **Hygrocybe chamaeleon** e **Hygrocybe mississippiensis**.

## PART I—MYCOLOGICAL LITERATURE ON TEXAS FLESHY BASIDIOMYCOTA

David Lewis has been collecting fungi in southeast Texas for over 30 years. During this time he has attempted to amass the literature that documents the fleshy Basidiomycota throughout Texas. Reported here are the results of the literature search as conducted by both authors. The authors' primary research interests center around gilled mushrooms and boletes (Agaricales sensu lato – but see Part III of this paper for a newer classification) so perhaps the list below is most complete for the fungi of these groups. We have, however, attempted to locate references for other fleshy basidiomycetous fungi.

For a reference to be included in the list, a collection must be cited from Texas. For modern references this is not difficult to discern because of the exacting requirements of locality information and herbarium designations. Publications that give the distribution as “as far as Texas” or something similar without documentation of collections are not included. A little more liberty is yielded to the literature of the nineteenth or early twentieth centuries where geographic information might not be as complete, nor is there a guarantee that a herbarium specimen exists.

Following each reference is a number in parenthesis. The number indicates how many species, with at least one Texas record, are reported in the article. For taxa that have the holotype from Texas, the binomials and localities (sometimes only the state name was given in the protologue) where collected are provided beneath the references, followed by the herbarium location of the holotype. We have relied on literature references and online herbaria data to determine the location of the holotypes, but we have not confirmed their continued existence in the designated herbaria. For a few of the older taxa we were not able to determine the location of the types. We are aware that a number of the newly described taxa have since been nomenclaturally or taxonomically synonymized, but we feel that for the purposes of this paper it is best to give only the basionym as the starting reference.

## RESULTS

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## DISCUSSION

We fear and predict that we have missed references for Texas because distribution reports are often found in obscure journals. We welcome feedback on citations that we may have missed and it is anticipated that a follow-up article with updated references will likely be forthcoming.

In addition to technical articles where collections are cited, there is additional literature in the format of field guides that include fungi found in Texas. Important is the field guide by Metzler and Metzler (1992) which includes 202 species primarily from southeastern Texas. Other useful field guides for the area include those by Bessette et al. (2000), Bessette et al. (2007), Horn et al. (1993), Lincoff (1981), Phillips (2005) and Weber and Smith (1985).

## PART II—NEW COMBINATIONS

The following two combinations are proposed in accordance with modern generic concepts based on morphology (Singer 1986) and supported by molecular evidence (Matheny 2006). During the process of preparing this manuscript and checking information in the protologue (Cibula 1979) for *Hygrophorus chamaeleon*, it came to our attention that the information regarding the type designation was not in order. In the protologue, the type collection information for *chamaeleon* was cited as follows:

“Specimen typicum Cibula n. 589 in Herb. Mass conservatum est; legit prope Saucier, MS, 8 August 1974.”

The first thing noticed was that the date for 589 was inconsistent with other numbers in the 500’s for collections cited in the Materials Studied, and 589 was not again cited in the Materials Studied. Checking no. 589 in Cibula’s field record book, which we have, 589 is listed as a *Russula*, and the date of that collection is 9 Oct. 1975. No *Hygrophorus* species were collected on that date. Unfortunately, we have not been able to confirm the whereabouts of 589 if it still exists as a collection. Checking the other collection numbers from Materials Studied of *chamaeleon* in Cibula’s record book, he has “type” written next to coll. no. 489 and 489 is also cited in the Materials Studied. Upon examination of collection no. 489, “type spec.” is written on the associated hand-written field label. The field label, record book and the original 5 × 8 in card with macroscopic description and collecting data all give the date for no. 489 as 20 Aug. 1974. Based on evidence from the field book and field label, Cibula had intended to designate 489 as the holotype, but somehow mistyped the collection information and date in the Latin description. We can find no violation of any articles in the International Code of Botanical Nomenclature (McNeill et al. 2006) for this error. We correct this error and conclude that Cibula coll. no. 489 is the holotype. Given below are the new combinations including the corrected type information for *H. chamaeleon*.

**Hygrocybe chamaeleon** (Cibula) Lewis & Ovrebo, comb. nov. BASIONYM: *Hygrophorus chamaeleon* Cibula, *Mycotaxon* 10:109. 1979. HOLOTYPE: MISSISSIPPI. HARRISON Co.: Saucier, Harrison Experimental Forest, De Soto National Forest, in humus along broadleaf evergreen draw across from Block II Plot 1, loblolly pine (north of plot), Fertilization Study Plots, 20 Aug 1974, W.G. Cibula 489 (NY!).

**Hygrocybe mississippiensis** (Cibula) Lewis & Ovrebo, comb. nov. BASIONYM: *Hygrophorus mississippiensis* Cibula, *Mycotaxon* 10:106. 1979. HOLOTYPE: MISSISSIPPI. HARRISON Co.: Saucier, Harrison Experimental Forest, De Soto National Forest, on a raised mound of earth and stumps, and in leaf litter in mixed bottomland hardwoods, adjacent to Block IV, Plot 4, loblolly pine, Fertilization Study Plots, 8 Aug 1974, W.G. Cibula 485 (NY!).

The field label gives the habitat for *H. mississippiensis* as a mixed pine/hardwood ravine. *Hygrocybe mississippiensis* was previously



reported from Texas (Lewis & Cibula 2000). The holotype collections of *H. chamaeleon* and *H. mississippiensis* were originally deposited at MASS, they are now at NY.

### PART III—NEW RECORDS OF FLESHY FUNGI FOR TEXAS

The following records are a result of long-term efforts by D.P. Lewis and C.L. Ovrebo of documenting the mycota of southeast Texas, through organized amateur and professional forays, and individual outings. This listing represents only a small beginning to the updating of fungus records for Texas and reflects only collecting done in southeast Texas. As is the case with all biodiversity studies, knowledge of the biodiversity of a region is a function of the efforts that have been mounted to conduct field work, and importantly, records must be based on vouchered collections. With the exception of the researches of Harry Thiers and David Lewis, no other mycologists have devoted equally the time and effort in cataloguing in a scientific way the fleshy mycota for this region. For this reason, our knowledge of the diversity of fungi for southeast Texas, let alone the entire state of Texas, is far from complete.

The orders and families listed below may not be the ones readers are most familiar with. Until recent years, families of mushrooms and boletes were included in the Agaricales (see Singer 1986). The order and family circumscriptions have changed significantly as a result of recent phylogenetic molecular analyses and now mushroom-type fungi and other fleshy fungi maybe placed in different orders and families to reflect a more natural classification system. Most of the classification hierarchy below is taken from Matheny et al. (2006) and the reader is directed to that entire Mycologia issue devoted to recent developments in elucidating our understanding of phylogenies of fungi.

### BASIDIOMYCOTA: AGARICOMYCETES: AGARICALES

#### AGARICACEAE

**Agaricus argenteus** Braendle in Peck. Found on lawns.

Voucher specimen: **Galveston Co.:** Santa Fe, Santa Fe Independent School grounds, field at corner of 6<sup>th</sup> Street and Warpath Street, N 29° 23.049', W 95° 06.383', 24 Jan 2008, DPL-8493 (F).

**Agaricus pocillator** Murr. Found in mixed pine-hardwood forest.

Voucher specimens: **Hardin Co.:** Big Thicket National Preserve, Jack Gore Baygall Unit, off FM 2937, 9 Nov 2002, DPL-6647 (F). **Orange Co.:** Vidor, near 455 Virginia Lane, 15 Jan 1989, DPL-4232 (F).

#### CORTINARIACEAE

**Cortinarius aureifolius** Peck. Found in an arid sandyland with *Pinus palustris* and oaks. (**Fig. 1**).

Voucher specimens: **Newton Co.:** Lewis Chapel community, Sand Ridge Cemetery, CR 4045, N 30° 44.580', W 93° 46.127', 19 Dec 2007, Ovrebo 4718 & 4719 (CSU).

**Cortinarius corrugatus** Peck. Under *Quercus laurifolia* and in beech-oak forest.

Voucher specimens: **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy 87, N 30° 42.509', W 93° 49.630', 19 Oct 2004, DPL-6959 (F). Mayflower, Canyon Rim Nature Trail, N 31° 06.927', W 93° 43.752', 27 Oct 2004, DPL-7049 (F); 29 Jul 2005, DPL-7286 (F).

**Cortinarius hesleri** Ammirati & A.H. Smith. Found in hardwood bottomland and oak-hickory forests.

Voucher specimens: **Newton Co.:** Toledo-Bend, Sam Forse Collins Recreational Area, N 31° 10.029', W 93° 34.620', 20 Jul 2007, DPL-8129 (F). **Tyler Co.:** Big Thicket National Preserve: Neches River Corridor Unit, Round Lake area, 13 Sep 2003, DPL-6807 (F).

**Cortinarius violaceus** (L.) S.F. Gray. Found in older pine forests.

Voucher specimens: **Hardin Co.:** Big Thicket National Preserve, Turkey Creek Unit, Kirby Nature Trail, 3 Dec 1978, DPL-1670 (F); Jack Gore Baygall Unit, Arco Oil Field Road, 28 Nov 1980, DPL-2451 (F); Jack Gore Baygall Unit, near FM 2937, 30 October 1993, DPL-5092 (F); 9 Nov 2002, DPL-6645 (F); 27 Nov 2004, DPL-7104 (F); Saratoga, Lance Rosier Unit, Teel Road, N 30° 15.629', W 94° 31.532', 7 Nov 2006, DPL-7608 (TAES); 11 Nov 2006, DPL-7643 (TAES). **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy 87, N 30° 42.509', W 93° 49.630', 1 Nov 1997, DPL-5962 (F).

#### ENTOLOMATACEAE

**Clitopilus prunulus** (Scop.) P. Kumm. Found in floodplains, oak and pine forest.

Voucher specimens: **Hardin Co.:** Big Thicket National Preserve, Saratoga, Lance Rosier Unit, Cotton Road, 10 Jul 1988, DPL-4135 (F). **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy 87, N 30° 42.509', W 93° 49.630', 10 Jun 2001, DPL-6459 (F); 18 Jun 2003, DPL-6687 (F); 12 Sep 2007, DPL-8274 (F).

**Clitopilus hobsonii** (Berk. & Br.) P.D. Orton. Found on rotten wood. Previously known from Europe, Florida and North Carolina.



Voucher specimen: **Hardin Co.:** Silsbee, residence on Pine Street, 31 Jul 1988, *DPL-4163* (F).

**Entoloma megacystidiosum** Hesler. Found in mixed pine-hardwood and beech forests, previously known only from the type in Tennessee.

Voucher specimens: **Hardin Co.:** Big Thicket National Preserve, Lance Rosier Unit, Saratoga, Cotton Road, 13 Jun 2007, *DPL-7906* (F); Turkey Creek Unit, Kirby Nature Trail, 22 Jul 2007, *DPL-8141* (F). **Newton Co.:** Mayflower, Canyon Rim Nature Trail, N 31° 06.927', W 93° 43.752', 3 Jul 2007, *DPL-8084* (F); 20 Jul 2007, *DPL-8122* (F).

## HYGROPHORACEAE

**Hygrocybe chamaeleon** (Cibula) Lewis & Ovrebo. Found in moss and mixed pine and hardwood forests, previously known from Harrison Co., Mississippi. (**Fig. 3**).

Voucher specimens: **Hardin Co.:** Big Thicket National Preserve, Saratoga, Lance Rosier Unit, Cotton Road, 13 Jun 2007, *DPL-7911* (F); Turkey Creek Unit, Kirby Nature Trail, 22 Jul 2007, *DPL-8142* (F).

**Hygrophorus borealis** f. **salmoneus** Coker. Known only from the type in North Carolina. Found in an upland pine forest next to *Magnolia grandifolia*.

Voucher specimen: **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy 87, N 30° 42.509', W 93° 49.630', 24 Nov 2008, *DPL-8815* (F).

**Hygrophorus caespitosus** (Murr.) Murr. Found in hardwood forests.

Voucher specimens: **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy 87, N 30° 42.509', W 93° 49.630', 28 Jun 2003, *DPL-6716* (F); 5 Jul 2003, *DPL-6742* (F). **Tyler Co.:** Temple-Inland Forest Lake Experimental Forest, *Quercus alba* test plot 26 Jun 1994, *DPL-5305* (F).

**Hygrophorus hypothejus** (Fr.) Fr. Found with *Pinus taeda*.

Voucher Specimens: **Jasper Co.:** Buna, Temple-Inland Black Branch Hunting Club, off CR 701 and FM 1004, 24 Dec 1991, *DPL-4578* (F). **Newton Co.:** Lewis Chapel Community, Sand Ridge Cemetery, CR 4045, 30 Dec 2006, *DPL-7798* (F). **Tyler Co.:** Big Thicket National Preserve, Turkey Creek Unit, Muscadine Road, 15 Dec 1979, *DPL-2147* (F).

**Hygrophorus perplexus** A.H. Smith & Hesler. Found in mixed pine and hardwoods.

Voucher specimen: **Hardin Co.:** Big Thicket National Preserve, Saratoga, Lance Rosier Unit, Teel Road, N 30° 15.629', W 94° 31.532', 11 Nov 2006, *DPL-7623* (TAES).

## HYMENOGASTRACEAE

**Hebeloma sarcophyllum** (Peck) Sacc. Found with *Quercus alba* and mixed pine-hardwood forests.

Voucher specimens: **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy 87, N 30° 42.509', W 93° 49.630', 13 May 2000, *DPL-6265* (F). **Tyler Co.:** Temple-Inland Forest Lake Experimental Forest, *Quercus alba* test plot, 15 Jun 1994, *DPL-5258* (F).

**Hebeloma sinapizans** (Fr.) Sacc. Found in mixed pine and hardwood forests.

Voucher specimens: **Newton Co.:** Lewis Chapel community, Sand Ridge Cemetery Road, CR 4045, near cemetery, N 30° 44.572', W 93° 46.094', 21 Dec 2007, *DPL-8438* (F). **Tyler Co.:** Big Thicket National Preserve: Canyonlands Unit, near Spurger, N 30° 43.241', W 94° 08.404', 20 Dec 2007, *DPL-8463*, *DPL-8464* (F).

## LYOPHYLLACEAE

**Tephrocybe palustris** (Peck) Donk. Found in sphagnum moss.

Voucher specimens: **Orange Co.:** Vidor, near Virginia Lane, 10 May 1979, *DPL-1724*, *DPL-1725* (F); 22 Feb 1986, *DPL-3954* (F); 28 Feb 1990, *DPL-4355* (F).

## MARASMIACEAE

**Marasmius fulvoferrugineus** Gilliam. Found in leaf litter.

Voucher specimens: **Hardin Co.:** Big Thicket National Preserve, Lance Rosier Unit, Saratoga, Teel Rd, N 30° 15.629', W 94° 31.532', 11 Nov 2006, *DPL-7681* (TAES); 19 Jul 2007, *DPL-8107* (F); Turkey Creek Unit, Kirby Nature Trail, 16 Jun 2007, *DPL-7989* (F). **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy 87, N 30° 42.509', W 93° 49.630', 20 Nov 2004, *DPL-7092* (F).

## OMPHALOTACEAE

**Gymnopus luxurians** (Peck) Murr. Subcaespitose on pine mulch.

Voucher specimen: **Jefferson Co.:** Beaumont, campus of Lamar University near John Gray Institute, 10 Jul 2006, *DPL-7494* (F).

## PLUTEACEAE

**Volvariella pusilla** (Pers.) Sing. Found on soil, with mixed pine and hardwoods.

Voucher specimen: **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy 87, N 30° 42.509', W 93° 49.630', 31 Aug 2003, *DPL-6770* (F).

**Volvariella taylori** (Berk. & Br.) Sing. Found in a dried up cypress swamp.

Voucher specimen: **Hardin Co.:** Big Thicket National Preserve, Saratoga, Lance Rosier Unit, Teel Road, N 30° 15.629', W 94° 31.532', 17 Jun 2006, *DPL-7422* (F).



PSATHYRELLACEAE

**Psathyrella rugocephala** (G.F. Atk.) A.H. Smith. Found in a hardwood forests.

Voucher specimens: **Fort Bend Co.:** Brazos Bend State Park, Hale Lake Nature Trail, 18 Nov 2006, DPL-7759 (F, TAES).

**Psathyrella carbonicola** A.H. Smith. Reported from the western U.S. and Michigan. On burned ground.

Voucher specimen: **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy 87, N 30° 42.509', W 93° 49.630', 27 Nov 2008, DPL-8818 (F).

STROPHARIACEAE

**Hypholoma sublateritium** (Fr.) Quél. Found on a well decayed hardwood stump.

Voucher specimen: **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy 87, N 30° 42.509', W 93° 49.630', 28 Nov 2008, DPL-8823 (F)

**Phaeomarasmius curcuma** (B. & C.) Sing. Found on wood (**Fig. 2**).

Voucher specimens: **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy 87, N 30° 42.509', W 93° 49.630', 24 Dec 1999, DPL-6214 (F); 21 Nov 2007, Ovrebo 4706 (CSU). **Orange Co.:** Vidor, near 455 Virginia Lane, 12 Apr 1977, DPL-915 (F); 14 May 1977, DPL-949 (F); 17 May 1977, DPL-955 (F); 23 May 1977, DPL-973 (F); 21 Apr 1978, DPL-1361 (F); 4 May 1978, DPL-1372 (F); 29 Dec 1981, DPL-2856 (F).

**Psilocybe caerulescens** Murr. Found in a *Pinus* plantation. Known from Alabama, central Mexico, Venezuela and Brazil.

Voucher specimen: **Tyler Co.:** Big Thicket National Preserve, Spurger, in pine plantation near Neches River Corridor Unit, 13 Sep 2003, DPL-6800 (F, XAL).

TRICHOLOMATACEAE

**Clitocybe trulliformis** (Fr.) P. Karst. Found in pine duff.

Voucher Specimen: **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy 87, N 30° 42.509', W 93° 49.630', 28 Jan 2001, DPL-6400 (F).

**Tricholoma niveipes** Peck. Found in arid sandy soil with pines and oaks (**Fig. 4**).

Voucher specimens: **Newton Co.:** Lewis Chapel Community, Sand Ridge Cemetery, CR 4045, N 30° 44.572', W 93° 46.094', 30 Dec 2006, Ovrebo 4637 & 21 Dec 2007, Ovrebo 4731 (CSU). (Fig. 4)

BOLETALES

**Boletellus chrysenteroides** (Snell) Sing. Found in mixed pine-hardwood forests.

Voucher specimens: **Hardin Co.:** Big Thicket National Preserve, Turkey Creek Unit, Kirby Nature Trail, Big 19 Sep 1980, DPL-2314 (F); Jack Gore Baygall Unit, off FM 2937, 4 Jul 1981, DPL-2664 (F); Lance Rosier Unit, Cotton Road, near Saratoga, 28 May 1984, DPL-3656 (F); 5 Aug 1984, DPL-3697 (F). **Tyler Co.:** Big Thicket National Preserve, Beech Creek Unit, Nature Trail, 4 Aug 1982, DPL-3241 (F); Spurger, near Neches River, 10 Aug 1982, DPL-3276 (F).

**Boletus auripes** Peck. Found with *Quercus alba*, *Quercus falcata* var. *leucophylla*, *Quercus nigra* and other oaks.

Voucher specimens: **Hardin Co.:** Big Thicket National Preserve, Jack Gore Baygall Unit, off FM 2937, 16 Aug 1982, DPL-3328 (F); Saratoga, Lance Rosier Unit, Cotton Road, 5 Aug 1984, DPL-3700 (F). **Tyler Co.:** Temple-Inland Forest Lake Experimental Forest, Sawtooth oak (*Quercus* sp.) test plot, 9 Jun 1992, DPL-4635 (F); *Quercus alba* test plot, 12 Jun 1992, DPL-4636 (F); *Quercus falcata* var. *leucophylla* test plot, 21 Jun 1992, DPL-4699 (F); *Quercus nigra* test plot, 7 Jun 1997, DPL-5783 (F).

**Boletus hortonii** A.H. Smith & Thiers. Found in stream floodplain forest.

Voucher specimen: **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy 87, N 30° 42.509', W 93° 49.630', 1 Jul 1996, DPL-5672 (F).

**Boletus hypocarycinus** Sing. Found in floodplains, oak and pine forest.

Voucher specimens: **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy 87, N 30° 42.509', W 93° 49.630', 19 Oct 2004, DPL-6966 (F). Lewis Chapel community, Sand Ridge Cemetery Road, CR 4045, 12 Jul 2006, DPL-7519 (F). Burkeville, along FM 692, 31 Jul 2007, DPL-8205 (F). **Orange Co.:** Vidor, near 455 Virginia Lane, 10 Oct 1993, DPL-5035 (F). **Tyler Co.:** Dam-B, residence on CR 4136, off FM 92, N 30° 48.811', W 94° 12.600', 10 Jul 1995, DPL-5498 (F). Temple-Inland Forest Lake Experimental Forest, *Quercus alba* test plot, 7 Aug 1995, DPL-5573 (F). Big Thicket National Preserve, Beech Creek Unit, south boundary road, 14 Jul 2006, DPL-7530 (F).

**Boletus longicurvipes** Snell & A.H. Smith. Found in mixed pine-hardwood forests, near baygall communities and in beech forests.

Voucher specimens: **Hardin Co.:** Big Thicket National Preserve, Jack Gore Baygall Unit, Arco Oil Field Road, 1 Aug 1982, DPL-3233 (F); Saratoga, Lance Rosier Unit, Cotton Road, 20 Oct 1984, DPL-3750 (F); Turkey Creek Unit, Kirby Nature Trail, 27 Oct 1984, DPL-3767 (F). **Montgomery Co.:** Conroe, Kidd Road, Big Ron's Construction Office, N 30° 15.326', W 95° 25.481', 28 Jul 2007, DPL-8176 (F). **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy 87, N 30° 42.509', W 93° 49.630', 26 Aug 2001, DPL-6518 (F); 24 Jul 2007, DPL-8151 (F). **Orange Co.:** Vidor, near 455 Virginia Lane, 30 Aug 1979, DPL-1916 (F); 15 Aug 1982, DPL-3317 (F).





Figs. 1–4. 1. *Cortinarius aureifolius*. 2. *Phaeomarasmius cucurma*. 3. *Hygrocybe chamaeleon*. 4. *Tricholoma niveipes*. Scale bar = 10 mm.



**Boletus morrisii** Peck. Found in beech hammocks next to baygall communities.

Voucher specimens: **Hardin Co.:** Big Thicket National Preserve, Jack Gore Baygall Unit, Arco Oil Field Road, 5 Aug 1983, *DPL-3584* (F); 25 Sep 1983, *DPL-3617* (F).

**Boletus rufomaculatus** Both. Found in mixed pine-hardwood forests.

Voucher specimen: **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy 87, N 30° 42.509', W 93° 49.630', 7 October 2004, *DPL-6929* (F).

**Tylopilus eximius** (Peck) Sing. Found in beech hammocks next to baygall communities.

Voucher specimens: **Hardin Co.:** Big Thicket National Preserve, Jack Gore Baygall Unit, Arco Oil Field Road, 25 Jun 1983, *DPL-3532* (F); 5 Aug 1983, *DPL-3585* (F); 25 Sep 1983, *DPL-3618* (F); 18 May 1984, *DPL-3651* (F); off FM 2937, 26 Jul 1985, *DPL-3878* (F).

**Nacogdoches Co.:** Angelina National Forest, Stephen Austin Experimental Forest, 17 Sep 1994, *DPL-5338* (F).

**Xanthoconium purpureum** Snell & Dick. Found in bottomland hardwood forests.

Voucher specimens: **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy 87, N 30° 42.509', W 93° 49.630', 1 Jul 1996, *DPL-5677* (TAES); 24 Jul 2007, *DPL-8154* (F).

**Rhizopogon baxteri** A.H. Smith. Known from Michigan and Mississippi.

Voucher specimen: **Hardin Co.:** Big Thicket National Preserve, Lance Rosier Unit, Saratoga, Teel Road, 15 Nov 2008, *DPL-8800* (F).

CANTHARELLALES

**Craterellus odoratus** (Schwein.) Fr. Found in mixed pine and hardwood forests.

Voucher specimens: **Hardin Co.:** Big Thicket National Preserve, Saratoga, Lance Rosier Unit, Teel Road, N 30° 15.629', W 94° 31.532', 13 Jun 2007, *DPL-7904* (F). **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy 87, N 30° 42.509', W 93° 49.630', 18 Jul 2003, *DPL-6758* (F). **Polk Co.:** Big Thicket National Preserve, Big Sandy Unit, off CR 1071, 24 Jul 1976, *DPL-445* (F). **Tyler Co.:** Fred, residence on FM 1943, 8 May 1976, *DPL-23* (F).

HYMENOGAETRALES

**Inonotus amplexans** Murr. Found on living branch of *Asimina parviflora*.

Voucher specimens: **Newton Co.:** Lewis Chapel Community, Sand Ridge Cemetery, CR 4045, 30 Jul 2006, *DPL-7553* (F); 21 Jul 2007, *DPL-8134* (F).

POLYPORALES

**Laetiporus persicinus** (B. & C.) Gilbertson. Found at the base of tree/dead stump.

Voucher specimens: **Hardin Co.:** Big Thicket National Preserve, Lance Rosier Unit, Saratoga, Teel Rd, N 30° 15.629', W 94° 31.532', 17 Jun 2006, *DPL-7450* (TAES, PC); Turkey Creek Unit, Kirby Nature Trail, 22 Jul 2007, *DPL-8145* (F).

**Pseudofavolus cucullatus** (Mont.) Pat. A tropical species found on small branches and twigs.

Voucher specimens: **Hardin Co.:** Big Thicket National Preserve, Lance Rosier Unit, Saratoga, Teel Road, 15 Nov 2008, *DPL-8797* (F); Big Thicket National Preserve, Turkey Creek Unit, Kirby Nature Trail, 16 Jun 2007, *DPL-7999* (F); 22 Jul 2007, *DPL-8144* (F); Lumberton, Village Creek State Park, Nature trail, 23 Jun 2001, *DPL-6479* (LSU). **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy 87, N 30° 42.509', W 93° 49.630', 11 Jul 2000, *DPL-6342* (F).

RUSSULALES

PODOSCYPHACEAE

**Cymatoderma caperatum** (Berk. & Mont.) D.A. Reid. A tropical species found on wood.

Voucher specimens: **Hardin Co.:** Big Thicket National Preserve, Lance Rosier Unit, Saratoga, Teel Road, N 30° 15.629', W 94° 31.532', 13 Jun 2007, *DPL-7905* (F). **Harris Co.:** Pasadena, Armand Bayou Nature Center, 17 Nov 2007, *DPL-8325* (TAES).

RUSSULACEAE

**Lactarius argillaceifolius** Hesler & A.H. Smith. Found in mixed pine and hardwood forests.

Voucher specimens: **Hardin Co.:** Big Thicket National Preserve, Saratoga, Lance Rosier Unit, Teel Road, N 30° 15.629', W 94° 31.532', 11 Nov 2006, *DPL-7670* (TAES). **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy 87, N 30° 42.509', W 93° 49.630', 7 Sep 1996, *DPL-5709* (F); 29 Oct 1998, *DPL-6116* (F).

**Lactarius atroviridis** Peck. Found in mixed pine and hardwood forests.

Voucher specimens: **Hardin Co.:** Big Thicket National Preserve, Lance Rosier Unit, Cotton Road, near Saratoga, 15 Oct 1983, *DPL-3633* (F). **Nacogdoches Co.:** Angelina National Forest, Stephen F. Austin Experimental Forest, 17 Sep 1994, *DPL-5339* (F); 24 Sep 1994, *DPL-5340* (F). **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy 87, N 30° 42.509', W 93° 49.630', 17 Sep 1996, *DPL-5339* (F); 4 November 1998, *DPL-6121* (F); 11 Nov 2004, *DPL-7083* (TAES). **San Jacinto Co.:** Sam Houston National Forest, Big Creek Scenic Area, 10 Oct 1998, *DPL-6096* (F). **Tyler Co.:** Town Bluff, residence off FM 92, 29 May 1994, *DPL-5206* (F).

**Lactarius caeruleitinctus** Murr. Found in mixed pine and hardwoods forests.

Voucher specimen: **Newton Co.:** Bleakwood, 262 CR 3062, N 30° 42.509', W 93° 49.630', 30 August 1998, *DPL-6071* (F); 1 Jun 2004, *DPL-6874* (F).



**Lactarius gerardii** Peck. Found in hardwood forests.

Voucher specimens: **Hardin Co.:** Kountze, by Beaumont Creek, 12 Aug 1982, DPL-3293 (F). **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy 87, N 30° 42.509', W 93° 49.630', 28 Jun 2003, DPL-6727 (F); 17 Jun 1999, DPL-6187 (F); 23 Oct 2004, DPL-6983 (F).

**Tyler Co.:** Big Thicket National Preserve, Neches River Corridor Unit, Round Lake, 13 Sep 2003, DPL-6789 (F).

**Lactarius imperceptus** Beards. & Burl. Found in mixed pine and hardwoods.

Voucher specimens: **Angelina Co.:** Angelina National Forest, FR 313A, 2 Jan 2007, DPL-7811 (F). **Hardin Co.:** Big Thicket National Preserve, Jack Gore Baygall Unit, near FM 2937, 28 Oct 1979, DPL-2080 (F); Turkey Creek Unit, Kirby Nature Trail, 21 Dec 1982, DPL-3405 (F); Big Thicket National Preserve, Saratoga, Lance Rosier Unit, Teel Road, N 30° 15.629', W 94° 31.532', 11 Nov 2006, DPL-7672 (TAES). **Jasper Co.:** Buna, Temple-Inland Black Branch Hunting Club, road 2, off CR 701, off FM 1004, 5 Nov 1993, DPL-5096 (F); 13 Nov 1993, DPL-5116 (F). **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy 87, N 30° 42.509', W 93° 49.630', 1 Nov 1997, DPL-5964 (F); 9 Nov 1997, DPL-5969 (F); 18 Dec 2006, DPL-7781 (F); Mayflower, Canyon Rim Nature Trail, 31.06.927 N, 93.43.752 W, 18 Dec 2007, DPL-8415 (F). **Polk Co.:** Big Thicket National Preserve, Big Sandy Unit, Sunflower Road, 29 Nov 1985, DPL-3932 (F). **Tyler Co.:** Big Thicket National Preserve, Turkey Creek Unit, off FM 1943, 15 Dec 1979, DPL-2144 (F); Temple-Inland Forest Lake Experimental Forest, *Quercus nigra* test plot, 24 Nov 1995, DPL-5594 (F); Big Thicket National Preserve, Canyonlands Unit, N 30° 06.927', W 93° 43.752', 20 Dec 2007, Ovrebo 4720 (CSU) & DPL-8444 (F).

**Lactarius lignyotus** var. **canadensis** A.H. Smith & Hesler. Found in sphagnum moss bog.

Voucher specimen: **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy. 87, N 30° 42.509', W 93° 49.630', 27 Sep 2003, DPL-6824 (F).

**Lactarius peckii** Burl. Found in hardwood floodplain forests and with *Quercus alba*.

Voucher specimens: **Hardin Co.:** Big Thicket National Preserve, Jack Gore Baygall Unit, Timber Slough Road, 18 Jul 1981, DPL-2735 (F). **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy. 87, N 30° 42.509', W 93° 49.630', 16 Jul 1995, DPL-5518 (F); 19 Jun 1996, DPL-5641 (F); 29 Oct 1998, DPL-6115 (F). **Tyler Co.:** Big Thicket National Preserve, Turkey Creek Unit, off FM 1943, 9 Aug 1981, DPL-2778 (F); Temple-Inland Forest Lake Experimental Forest, *Quercus nigra* test plot, 13 Jun 1993, DPL-5011 (F); 22 Jun 1996, DPL-5651 (F); 7 Jun 1997, DPL-5788 (F); *Quercus alba* test plot, 30 May 1994, DPL-5225 (F); 22 Jul 1995, DPL-5550 (F); 7 Jun 1997, DPL-5787 (F).

#### SEBACINALES

**Sebacina conrescens** (Schwein.) P. Roberts. Found in mixed pine and hardwood forests on a vine.

Voucher specimen: **Hardin Co.:** Big Thicket National Preserve, Saratoga, Lance Rosier Unit Teel Road, N 30° 15.629', W 94° 31.532', 19 Jul 2007, DPL-8114 (F).

#### CORTICIALES

**Punctularia strigosozonata** (Schwein.) Talbot. Found on hardwood logs.

Voucher specimens: **Hardin Co.:** Big Thicket National Preserve, Turkey Creek Unit, Kirby Nature Trail, N 30° 27.738', W 94° 21.015', 14 Jun 2008, DPL-8670 (F). **Newton Co.:** Bleakwood, 262 CR 3062 & State Hwy. 87, N 30° 42.509', W 93° 49.630', 13 Jan 2008, DPL-8491 (F); Mayflower, Canyon Rim Nature Trail, N 31° 06.927', W 93° 43.752', 18 Dec 2007, DPL-8427 (F).

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